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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/575,498

09/26/2006

Takeshi Okano

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EXAMINER

TAN, VIBOL

ART UNIT

PAPER NUMBER

2819

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/575,498	Applicant(s) OKANO ET AL.	
	Examiner Vibol Tan	Art Unit 2819	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6 and 7 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 8-13, 16 and 17 is/are rejected.
- 7) ☒ Claim(s) 4, 14, 15 and 18-20 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>9/10/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-3, 5, 8-13, 16 and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Den (U. S. PAT. 3,646,481).

In claim 1, Den teaches all claimed features in Fig. 2, a waveguide conversion device comprising: a rectangular waveguide (102); a circular waveguide (101) connected to the rectangular waveguide; and an unnecessary-wave suppression groove (space in front of plunger 34) is provided in a mode conversion part between the rectangular waveguide (102) and the circular waveguide (101), the unnecessary-wave suppression groove preventing an unnecessary transmission mode (col. 3, line 1-3) from being excited in the circular waveguide when high signals (maximum; col. 3, line 12) are transmitted between the waveguides .

In claim 2, Den further teaches the waveguide conversion device according to claim 1, wherein the unnecessary-wave suppression groove (the space in front of plunger 34) is provided in either one or both of the rectangular waveguide and the circular waveguide (101) and extends in a direction that is perpendicular to an electric field component (TM₁₁) of the unnecessary transmission mode.

In claim 3, Den further teaches the waveguide conversion device according to claim 1, wherein the unnecessary-wave suppression groove (the space in front of plunger 34) is provided in the rectangular waveguide at a position corresponding to an axis (z direction) of the circular waveguide.

In claim 5, Den further teaches the waveguide conversion device according to claim 1 further comprising an alignment part (center 12, holes 18 and 20) is provided between the rectangular waveguide (102) and the circular waveguide (101), to align the rectangular waveguide with the circular waveguide when the waveguides are connected to each other.

In claim 8, Den further teaches the waveguide conversion device according to claim 1, wherein the rectangular waveguide transmits TE₁₀ mode signals (TE₂₀); and the circular waveguide transmits TM₀₁ mode signals (TM₁₁).

In claim 9, Den further teaches the waveguide conversion device according to claim 1, wherein the circular waveguide (101) is connected to an H plane (horizontal plane) of the rectangular waveguide (102).

In claim 10, Den further teaches the waveguide conversion device according to claim 9, wherein the circular waveguide (101) is connected to the rectangular waveguide (102) at a right angle (as seen in Fig. 2).

In claim 11, Den further teaches the waveguide conversion device according to claim 1, wherein the circular waveguide (101) is connected to the rectangular waveguide (102) at a right angle (as seen in Fig. 2).

In claim 12, Den further teaches the waveguide conversion device according to claim 1, wherein the unnecessary transmission mode is a (TE₂₀) mode.

In claim 13, Den further teaches the waveguide conversion device according to claim 1, wherein the unnecessary-wave suppression groove (the space in front of plunger 34) has a length of one half or more than one half of a length (plunger 34 is adjustable) of one wave of the signals transmitted between the waveguides.

In claim 16, Den further teaches the waveguide conversion device according to claim 1, wherein the unnecessary-wave suppression groove has a rectangular cross-section (as seen in Fig. 2).

In claim 17, Den further teaches the waveguide conversion device according to claim 1, wherein the unnecessary-wave suppression groove is disposed at a position corresponding to a 0-0 axis (center 12) of the circular waveguide.

3. Claims 4, 14, 15 and 18-20 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. Claims 6 and 7 appear to comprise allowable subject matter.

Response to Arguments

5. Applicant's arguments filed 8/29/2008 have been fully considered but they are not persuasive. In claim 1, Applicants argued that the applied reference of Den failed to teach or suggest the unnecessary-wave suppression groove preventing an unnecessary transmission mode from being excited in the circular waveguide when high signals are transmitted between the waveguides. However, the examiner respectfully disagrees

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because the space in front of the plunger 34 is considered to be the claimed unnecessary-wave suppression groove, as required by claim 1. Therefore, it prevents an unnecessary transmission mode from being excited in the circular waveguide when signals are transmitted between the waveguides 102 and 101.

It is respectfully submitted that **WHEN THE STRUCTURE RECITED IN THE REFERENCE IS SUBSTANTIALLY IDENTICAL TO THAT OF THE CLAIMS, CLAIMED PROPERTIES OR FUNCTIONS ARE PRESUMED TO BE INHERENT** Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 562 F.2d at 1255, 195 USPQ at 433. See also Titanium Metals Corp. v. Banner, 778 F.2d 775, 227 USPQ 773 (Fed. Cir. 1985) (Claims were directed to a titanium alloy containing 0.2-0.4% Mo and 0.6-0.9% Ni having corrosion resistance. A Russian article disclosed a titanium alloy containing 0.25% Mo and 0.75% Ni but was silent as to corrosion resistance. The Federal Circuit held that the claim was anticipated because the percentages of Mo and Ni were squarely within the claimed ranges. The court went on

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to say that it was immaterial what properties the alloys had or who discovered the properties because the composition is the same and thus must necessarily exhibit the properties.). See also *In re Ludtke*, 441 F.2d 660, 169 USPQ 563 (CCPA 1971) (Claim 1 was directed to a parachute canopy having concentric circumferential panels radially separated from each other by radially extending tie lines. The panels were separated “such that the critical velocity of each successively larger panel will be less than the critical velocity of the previous panel, whereby said parachute will sequentially open and thus gradually decelerate.” The court found that the claim was anticipated by Menget. Menget taught a parachute having three circumferential panels separated by tie lines. The court upheld the rejection finding that applicant had failed to show that Menget did not possess the functional characteristics of the claims.); *Northam Warren Corp. v. D. F. Newfield Co.*, 7 F. Supp. 773, 22 USPQ 313 (E.D.N.Y. 1934) (A patent to a pencil for cleaning fingernails was held invalid because a pencil of the same structure for writing was found in the prior art.).

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Vibol Tan whose telephone number is (571) 272-1811. The examiner can normally be reached on Monday-Friday (7:00 AM-4:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rexford Barnie can be reached on (571) 272-7492. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Vibol Tan/
Primary Examiner
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